

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-26 are pending, with Claims 1, 5, 6, 18, 22 and 23 amended by the present amendment.

In the Official Action, Claims 10, 11, and 13-17 were allowed; Claims 5, 6, 22 and 23 were indicated as containing allowable subject matter; Claims 1-4, 7-9, 12, 18-21 and 24-26 were rejected under 35 U.S.C. § 102(b) as being anticipated by Chiang et al. (U.S. Patent Publication No. 2002/0158798, hereinafter Chiang); and the IDS of April 26, 2004 was objected to.

Applicant acknowledges with appreciation the indication of allowable subject matter.

Claims 1 and 18 are amended to more clearly describe and distinctly claim Applicant's invention. Support for this amendment is found in Applicant's originally filed specification. Allowable Claims 5, 6, 22, and 23 are amended into independent form with an amendment to add all features from the base claim and any intervening claims. No new matter is added.

Applicants traverse the objection to the Information Disclosure Statement (IDS) with respect to WO 02/13310 and DE 4313395. As noted in Applicant's IDS of April 26, 2004, WO 02/13310 was filed with an English Abstract. M.P.E.P. § 609.04(a)(iii) notes that submission of an English language abstract or a reference may fulfill the requirement for a concise explanation of relevancy. Thus, Applicant requests that the Examiner consider WO 02/13310.

Furthermore, both WO/02/13310 and DE4313395 were cited in the EPO Search Report filed with the IDS of April 26, 2004. M.P.E.P. § 609.04(a)(iii) also states that an "X", "Y", or "A" indicator on a search report is a satisfactory statement of relevancy.

For the Examiner's convenience, an English abstract and a machine translation of DE 4313395 is filed herewith via an IDS. Also filed via IDS is another copy of the EPO Search Report and a subsequent EPO Examination Report. Either one of these EPO documents may also be considered for statements of relevancy.

Briefly recapitulating, Claim 1 is directed to a MIMO transceiver including an antenna array having a plurality of antennas; and a scattering structure, associated with the plurality of antennas, configured to receive the signals from the plurality of antennas, and to increase path diversity associated with the transceiver.

Chiang describes an antenna array having a central active element and a plurality of passive elements surrounding the active element. In Figure 3 of Chiang, antenna array 130 includes a single excited antenna element 132 surrounded by five passive reflector-directors 134-138. In one embodiment, active element 132 and passive elements 134-138 are dipole antennas. Active element 132 is electrically connected to a 50 ohm transmission line 140. Each passive element 134-138 is attached to a single pole double throw switch 160. The position of the 160 places each of the passive elements in either a directive or reflective state.¹

Antenna array 130 provides a fixed beam directive pattern in the direction identified by arrowhead 164 by placing passive elements 134, 137 and 138 in a reflective state while passive elements 135 and 136 are switched to the directive state. Scanning of the beam is accomplished by progressively opening and closing adjacent switches 160 in the circle formed by the passive elements. An omnidirectional mode is achieved when all passive elements are placed in the directive state.²

In Figures 9 and 11-14, an antenna array 258 is shown having a ground plane 260, active element 202, and passive elements 200. In addition, antenna array 258 includes a

¹ Chiang paragraph [0033].

² Chiang paragraph [0035].

plurality of parasitic conductive gratings 262 which are spaced apart from and along radial lines similar to passive elements 200.³

However, Chiang does not disclose or suggest a **MIMO** transmitter. MIMO (multiple input, multiple output) is an antenna technology for wireless communications in which multiple antennas are used at both the source (transmitter) and the destination (receiver). The antennas at each end of the communications circuit are combined to minimize errors and optimize data speed. The transmitter of Chiang is a SISO device. SISO (single input, single output) refers to a wireless communications system in which one antenna is used at the source (transmitter) and one antenna is used at the destination (receiver).

Chiang also does not disclose or suggest a scattering structure **configured to increase path diversity**. That is, the scattering structures of Chiang are configured to increase the directionality of the beam formed at the transceiver, and are not configured to increase path diversity.

MPEP § 2131 notes that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also MPEP § 2131.02. “The identical invention must be shown in as complete detail as is contained in the ... claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because Chiang does not disclose or suggest all the features recited in Claims 1 and 18, Chiang does not anticipate the invention recited in Claims 1 and 18, and all claims depending therefrom.

³ Chiang paragraph [0046].

Accordingly, in view of the present amendment and in light of the previous discussion, Applicant respectfully submits that the present application is in condition for allowance and respectfully requests an early and favorable action to that effect.

Respectfully submitted,

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